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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,836

04/18/2006

Pengju Kang

03-293-US

2285

34704 7590 02/25/2009

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EXAMINER

COLON SANTANA, EDUARDO

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

02/25/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,836	<b>Applicant(s)</b> KANG ET AL.	
	<b>Examiner</b> Eduardo Colon-Santana	<b>Art Unit</b> 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> .                  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koopman Jr. et al. U.S. Patent No. 5,682,024 in view of Silberhorn et al. U.S. Patent No. 6,612,403.

Referring to claims 1 and 12, Koopman Jr. et al. disclose an elevator position determination system (see figures 2-5 and respective portions of the specification). Koopman Jr. et al. further depicts from figure 2, a RF reader (36) for receiving coded data from at least

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one RF tag (38) and a means (44) (see figure 3) for decoding the encoded data. However, Koopman Jr. et al. does not teach or describe having an optical device for capturing an image of a visual cue and means for processing the capture image and furthermore a means for combining the decoded data from the RF reader and the detected visual cue to calculate a position of a moveable platform. Nonetheless, Silberhorn et al. discloses an apparatus for determining the position of an elevator using at least one optical device (3) see figure 1, and means (6 and DP) for processing the capture image (5.1). Moreover, Silberhorn et al. discloses a means (7 or 10) for combining a current image with a reference image. Since Koopman Jr. et al. and Silberhorn are in the same field of endeavor, regarding determining position of an elevator, the purpose disclosed by Silberhorn would have been recognized in the pertinent art of Koopman Jr. and vice versa. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an RF reader and an optical device in combination as taught by Koopman Jr. and Silberhorn within the teaching for determining elevator position for the purpose/advantages of increasing and improving safety by having two redundant system, wherein one system records the surface structure or surface pattern, while the other receives information from a RF tag positioned at different locations that does not require a power source other than the power provided by the RF reader in case there is a power loss.

Additionally, the claims would have been obvious since all the claimed elements (i.e. RF reader, RF tag, optical device, etc.) were

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known in the prior art disclosed above, and one skill in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to claims 2, 3 and 13, Koopman Jr. et al. depicts having the RF reader (36) affixed to an elevator car (16). Additionally, Silberhorn et al. depicts having an optical device (3) affixed to an elevator car (C).

Referring to claims 4, 5, 10, 15 and 16, Silberhorn et al. discloses that optical device (3) may be provided with a line sensor for capturing one dimensional images being a horizontal line (5.1) or a two dimensional surface sensor for capturing a two dimensional image (see Col. 3, lines 62-65).

As to claims 6 and 17, Koopman Jr. et al. discloses in figure 3, a memory (48) to stored position information of each RF tag (38). In addition Silberhorn et al. depicts from figure 1, a database to store the visual markers as capture by means (6) and later retrieve at least one fixed position (8) to compare it (9) with a new capture image from a fixed position capture from the optical device (3), to determined the location of the elevator (see Col. 3, lines 27-54 of Silberhorn et al.).

Referring to claim 7, Silberhorn et al. depicts from figure 1, an illumination source (4).

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As to claims 8 and 9, Silberhorn et al. only mentions the use of LED's or halogen lamps (see Col. 2, lines 53-55), which can be manufacture to emit light beams in different wavelength ranges. It would have been obvious to one of ordinary skill in the art at the time of the invention to have visible light, ultraviolet or infrared light as an illumination source and camera, since all are readily available commercially and have the advantage that the light beam is either visible by the eye or checked by simple sensors installed on the camera.

Referring to claims 11 and 14, Silberhorn et al. discloses in figure 2, a method for performing sub-pixel image processing (see steps S1, S4 and S5 and Col. 4, line 60 to Col. 5, line 55).

### **Conclusion**

2. The prior art made of record in form 892 and not specifically relied upon is considered pertinent to applicant's disclosure to further show the state of the art.

The prior art made of record include parent cases with the same assignee and same inventors and references showing apparatus and methods for determining position of the elevator by using various forms of light broadly including electromagnetic radiation both in the human visible spectrum and in the infrared and ultraviolet spectrums.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Colon-Santana whose telephone number is (571)272-2060. The examiner can normally be reached on Monday thru Friday 7:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571) 272-2800 X.37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eduardo Colon-Santana/  
Patent Examiner  
Art Unit 2837

/ECS/  
February 13, 2009

/T C Patel/  
Supervisory Patent Examiner, Art Unit 2839